



# Crowd investing for solar roofs in Križevci

## Križevci, Croatia

### IN A NUTSHELL

*A crowd investing project financed by citizens invested in the energy transition of Križevci, Croatia. It helped the municipality to build a rooftop PV power plant, delivering benefits for citizens, the economy and the environment.*



PV plant. - © Križevci

### Citizen-powered solar roofs

Križevci is a town located in central Croatia with a total population of 21,122.

In 2018 it started the first pilot project in Croatia for citizens crowd investing in renewable energies, aiming at the installation of a solar panel (PV) power plant on the rooftop of the municipality’s Development Center and Technology Park’s administrative building.

This initiative was led by the Green Energy Cooperative ZEZ with its partners: The municipality of Križevci, Regional Energy Agency North, Greenpeace Croatia, Solvis and ACT Group.

The municipality of Križevci provided administrative and financial support in the preparation phase and grants an energy-saving fee for 10 years to investors; the Green Energy Cooperative has provided the solar equipment on lease to the city for 10 years; the Regional Energy Agency North developed a cost-effectiveness analysis and the general design documentation; Solvis, a PV module producer from Croatia, installed the PV plant on the rooftop.

### Citizen financing mechanism

Crowd investing for renewable energy has become quite common in the last few years with many available platforms for managing projects and communication with the investors, making these projects also interesting for small municipalities, with the possibility to obtain a good return on investment – also because of the decreasing costs of technology.

The financing of the power plant started with a fundraising campaign, which included 53 investors with an average investment of €500, raising a total of €31,000 for a 30 kW PV plant. The campaign managed to collect the total amount of money needed in only 10 days.

A follow up campaign was launched for a second PV plant (production capacity of 33,000 kWh/a.), which confirmed the interest of citizens

## KRIŽEVCI



**Population:**

21,122

**Area**

263.7 km<sup>2</sup>

**Signatory to the Covenant of Mayors since:**  
2011, new objectives signed in 2019

**CO<sub>2</sub> emission reduction target:**  
20% by 2020; 40% by 2030 and adaptation

in financing the project. The €23,000 target budget was raised for the second PV system in only 48 hours since the crowdfunding was started, with a final amount raised four times higher than the target.

## How does the system work in practice

The PV system, with a capacity of 30 kW, was installed on the rooftop of the business support centre, and ensured in the first instance the electricity needs of the users of the building. The municipality covers the cost of the electricity consumption, and pays back the citizens that have invested in the project through the monthly savings obtained. Any energy surplus produced from the PV plant is sold to the network. The cooperative works with the municipality as the main implementing partner, involving citizens through micro-loans and paying them back with a fixed interest of 4.5%. In the second campaign the interest rate was brought to 3%, as the main driver to investments from citizens was contributing to community development rather than profit.

The estimated time for the return on investment is 10 years, after which the PV system ownership will be transferred to the municipality.

## Challenges and success factors

The project was a great opportunity for the municipality to be involved in a cooperative project that helped raise its profile and engage public institutions and citizens in a joint process of urban, green and sustainable transformation. It also opened the door to participation in several new projects and developing new partnerships.

Beyond energy savings, a key success factor was the community engagement component. Investors in the Križevci solar roofs project, together with other interested citizens, established a local energy cooperative in March 2020 - KLIK (Križevci Laboratory for Innovation in Climate) and are planning new public-private projects.

The experience of Križevci also shows that having a local cooperative running the project brings a definite added value for gaining trust and establishing a solid process.

Besides the social benefits, the local renewable energy production and mitigation gain is also noteworthy, with 33,000 kWh produced by the PV system and 7.72 tonnes of CO<sub>2</sub> saved each year.

Another success factor of the project was the selection of a building targeted for the solar roof that has a good share of electricity consumption on site.

However, the success did not come without some challenges. The legislative frameworks make it burdensome to provide all administrative documents to and processes for such innovative financing projects, including the applications for green subsidies and certificates.



### KEY FIGURES

with **33,000 kWh** produced by the PV system and **7.72** tonnes of CO<sub>2</sub> saved each year

**53** investors

average citizens' investment of **€500**



### FINANCING THE PROJECT

- + **Financing source(s):**  
citizens finance
- + **Total project budget:**  
€31,000 (development centre);  
€23,000 (library)
- + **Payback period:**  
10 years

### USEFUL LINKS

- ▶ <https://bit.ly/30cCsyS>
- ▶ Development center: <https://bit.ly/2Uafg0k>
- ▶ Library: <https://bit.ly/2XxGiAO>



### CONTACT

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